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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,319	07/18/2003	Rikard M. Kjellberg	3399P110C	4333

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EXAMINER

ASSESSOR, BRIAN J

ART UNIT PAPER NUMBER

2114

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/622,319	Applicant(s) KJELLBERG, RIKARD M.	
	Examiner Brian J. Assessor	Art Unit 2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-16, 18-24, 26-36, 38 and 39 is/are rejected.
- 7) ☒ Claim(s) 13, 17, 25 and 37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>4/28/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

Claims 1, 15, and 35 of this application conflict with claims 19 and 24 of Application No. 10/658871. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

Claims 1, 15, and 35 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 19 and 24 of U.S. Patent No. 2004/0153714. Although the conflicting claims are not identical, they are not patentably distinct from each other because

As per claim 1 is rejected for double patenting with claim 19. The words "causing" and "enabling" are synonyms and therefore they are obvious type double patenting.

As per claim 15 is rejected for double patenting with claim 24. The removal of the word period makes claim 15 a broader version of claim 24, therefore they are obvious type double patenting.

As per claim 35 is rejected for double patenting with claim 24. The removal of the word period makes claim 35 a broader version of claim 24, and The inclusion of a

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processor and memory are inherent additions to computer system. Therefore they are obvious type double patenting.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 29-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Li (5,473,599).

As per claim 1, Li teaches:

A method comprising:

maintaining a plurality of processes in a processing system, each with an ability to independently monitor a status of all of said plurality of processes, without the use of a master; (Li column 2, line 65 – column 3, line 5)

enabling said plurality of processes to interact with each other to establish a priority of status, such that each of said plurality of processes can alter the priority of another of said plurality of processes without the use of a master to enable said interaction or alteration of priority. (Li column 9, lines 27-42)

As per claim 2, Li teaches:

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A method as recited in claim 1, wherein said interaction and said alteration amongst said plurality of processes is used to enable fault tolerance for at least one of said processes in said processing system. (Li column 3, lines 10-14)

As per claim 3, Li teaches:

A method as recited in claim 1, wherein said status is one of: primary, to become primary, or standby. (Li column 9, lines 32-34; 46-48)

As per claim 4, Li teaches:

A method as recited in claim 1, wherein said priority is based on a value of an identifier assigned to each of said plurality of processes. (Li column 9, lines 29-31)

As per claim 5, Li teaches:

A method as recited in claim 4, wherein said priority is further based on the status assigned to each of said plurality of processes. (Li column 9, lines 27-31)

As per claim 29, Li teaches:

A processing system comprising:

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a plurality of processes, wherein each of said plurality of processes is able to independently monitor a status of each other of said plurality of processes, each of said processes communicating with each other to establish a priority of status such that at least one of said plurality of processes can change a status of each other. (Li column 3, lines 5-14)

As per claim 30, Li teaches:

The processing system recited by claim 29, wherein a master is not required to monitor and establish priority amongst said plurality of processes. (Li column 3, lines 10-14)

As per claim 31, Li teaches:

The processing system recited by claim 29, wherein said monitoring and establishment of priority amongst said plurality of processes is accomplished from the broadcasting of heart-beat messages. (Li column 2, line 65 – column 3, line 5)

As per claim 32, Li teaches:

The processing system recited by claim 29, wherein said monitoring and establishment of priority amongst said plurality of processes is used to enable fault tolerance for at least one of said processes in said processing system. (Li column 3, lines 5-14; if a primary process fails, a failover takes place to replace it, based on priority.)

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As per claim 33, Li teaches:

The processing system recited in claim 29, wherein said processing system comprises one or more computers. (Li multiple routers are communicating in order to determine priority)

As per claim 34, Li teaches:

The processing system recited in claim 29, wherein said communication between said plurality of processes does not require a master. (Li column 3, lines 10-14)

Claims 9-12, 14, 22-24, and 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown (4,710,926).

As per claim 9, Brown teaches:

A method for admitting a new process into a processing system, the method comprising:

admitting said new process into said processing system, such that a time at which said new process is admitted is based on whether one or more processes are being concurrently admitted with said new process; (Brown columns 9, line 62 – column 10, line 10; The new processor must access the tables to gain the appropriate information, multiple new processors our have to access the table in order.)

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causing said new process to broadcast a heart-beat message to notify each of a plurality of processes that said new process has been admitted into said processing system; (Brown column 10, lines 62-65)

causing each of said plurality of processes to maintain a record identifying each of said plurality of processes; (Brown column 7, lines 5-11)

updating the record of each of said plurality of processes to include said new process. (Brown column 7, lines 5-11)

As per claim 10, Brown teaches:

A method as recited in claim 9, further comprising assigning said new processes a service type. (Brown column 3, lines 56-59; each processor runs a process and all are the same service type.)

As per claim 11, Brown teaches:

A method as recited in claim 9, wherein said heartbeat message broadcast by said new process includes an identifier. (Brown column 7, lines 6-7)

As per claim 12, Brown teaches:

A method as recited in claim 9, wherein said heartbeat message broadcast by said new process includes a status. (Brown column 7, line 7)

As per claim 14, Brown teaches:

A method as recited in claim 9, wherein maintenance of a record by each of said plurality of processes is accomplished independent of each other. (Brown column 7, lines 5-11; each process has its own table)

As per claim 22, Brown teaches:

A processing system comprising:

a computer, wherein said computer introduces a new process into a processing system such that said new process is assigned an identifier; (Brown column 7, lines 5-7; when a new process comes online an identifier would have to be assigned.)

means for enabling said new process to broadcast a heart-beat message to said processing system; (Brown column 10, lines 62-65)

means for causing a plurality of processes to receive, in said processing system, said heart-beat message, wherein said heart-beat message requests said plurality of processes to individually broadcast a heart-beat message; (Brown column 9, lines 46-50)

means for causing each of said plurality of processes to broadcast an individual heart-beat message wherein said new process receives said individual heart-beat message during a time set by a timer; (Brown column 10, lines 65-68)

means for causing each of said plurality of processes to maintain an individual record of processes wherein said record contains an identifier, a status, a service type (Brown column 7, lines 5-11) and a workload of each of said plurality of processes;

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(Brown column 9, lines 59-62; hardware equivalents would inherently include throughput, processing speed and other workload related information.)

means for causing said plurality of processes to establish a communication amongst each other, wherein said communication provides for an establishment of priority and status for each of said processes; (Brown column 2, 53-68)

means for enabling said plurality of processes to replace one or more faulty processes; and means for enabling said processing system to introduce one or more new processes. (Brown column 9, lines 35-39)

As per claim 23, Brown teaches:

The method recited in claim 22, wherein said broadcast of said heart-beat message includes a status. (Brown column 7, line 7)

As per claim 24, Brown teaches:

The method recited in claim 22, wherein said broadcast of said heart-beat message includes an identifier. (Brown column 7, lines 6-7)

As per claim 26, Brown teaches:

The method recited in claim 22, wherein said broadcast of said heart-beat message includes a service type. (Brown column 3, lines 56-59; each processor runs a process and all are the same service type.)

As per claim 27, Brown teaches:

The method recited in claim 22, wherein a replacement of one or more processes is based on the priority of each of said plurality of processes. (Brown column 9, lines 20-26)

As per claim 28, Brown teaches:

The method recited in claim 22, wherein an introduction of one or more new processes is based on a need for said new processes, wherein said need is based on a type of service. (Brown column 9, lines 59-62; an equivalent processor would have to be selected.)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (5,473,599) in view of Nam (2004/0258007).

As per claim 6, Li teaches:

A method for creating autonomy within a new process being admitted into a processing system, the method comprising:

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causing said new process to directly communicate with a plurality of process in the processing system; (Li column 2, line 65 – column 3, line 5)

enabling said new process to update a status in response to other events occurring in said processing system; (Li column 2, lines 44-47)

causing said new process to maintain a status in said processing system; and (Li column 2, lines 44-47; a router maintains its standby or active “primary” unless a change is made.)

causing said new process to adapt to changes in said processing system. (Li column 2, lines 25-28; if a active fails the standby takes over as new primary)

Li does not explicitly disclose a method for enabling a new process to assign itself a unique, platform-independent identity, wherein an assignment of identity occurs at the time said new process is admitted into said processing system;

In paragraph 0043, Nam clearly teaches a method for a process to assign itself a unique identifier. It would have been obvious to a person of ordinary skill in the art at the time of invention to include the self assignment of identifiers as taught by Nam in order to create a more simple form of process identification. This would have been obvious because Nam teaches that the above method is better suited for reducing the load on the network. (Nam paragraph 0009)

As per claim 7, Li teaches:

A method as recited in claim 6, wherein said status is one of: primary, to become primary, or standby. (Li column 9, lines 32-34; 46-48)

As per claim 8, Li teaches:

A method as recited in claim 6, wherein a creation of autonomy within a new process allows for fault tolerance in a processing system without the need for a master. (Li column 2, lines 25-28; 48-52; primary failover and election are handled without the presence of a master.)

Claims 15, 16, 18, 35, 36, 38, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (4,710,926) in view of Li (5,473,599).

As per claim 15, Brown teaches:

A method for providing fault tolerance in a processing system, the method comprising:

enabling a plurality of processes in a processing system each to broadcast a heart-beat message, wherein said heart-beat message includes an identifier for each of said plurality of processes; (Brown column 7, lines 5-11)

enabling each of said plurality of processes to receive said heart-beat message; (Brown column 7, lines 5-11)

causing each of said plurality of processes to maintain an individual record of said plurality of processes; (Brown column 7, lines 5-11)

causing each of said plurality of processes to update said individual record based on said heart-beat messages; (Brown column 7, lines 5-11)

assigning each of said processes with a status, wherein said status is one of:
primary, to become primary, or standby; (Brown column 4, lines 55-59)

Brown does not explicitly disclose a method enabling said plurality of processes to negotiate a hierarchy of control amongst each other based on the broadcast and receipt of heart-beat messages by each of said plurality of processes, wherein said hierarchy of control is based on the status of each of said plurality of processes.

In column 2, lines 44-64; column 3, lines 5-14; column 9, lines 34-42 and in column 9, lines 29-31 respectively Li discloses a method in which multiple processes determine the priority status of each of the processes. It would have been obvious to a person of ordinary skill in the art at the time of invention to include the priority status method as taught by Li, in order to create a more efficient stand-by takeover system. This would have been obvious because Li clearly teaches that the above system is better suited for a more simplistic device failover within a network. (Li column 2, lines 9-12)

As per claim 16, Brown teaches:

A method recited in claim 15, wherein said heart-beat message further includes a service type. (Brown column 3, lines 56-59; each processor runs a process and all are the same service type.)

As per claim 18, Li teaches:

The method recited in claim 15, wherein said negotiation between said plurality of processes allow for changing a status of one or more of said plurality of processes.
(Li column 9, lines 27-42)

As per claim 35:

Claim 35 is a processing system claim corresponding to the method claim 15. Therefore, claim 35 is rejected for the same rationale set forth in claim 15, with the exception of the following limitations, which are also rejected under Brown.

a processor; (Brown figure 7, element 62-10)

a memory containing software; (Brown figure 7, element 62-50)

As per claim 36, Brown teaches:

The processing system recited in claim 35, wherein said individual heartbeat message further contains a status. (Brown column 7, line 7)

Claims 38 and 39 respectfully, are processing system claims corresponding to method claims 16 and 18. Therefore, claims 38 and 39 are rejected for the same rationale set forth in claims 16 and 18.

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (5,473,599) in view of Brown (4,710,926).

As per claim 19, Li teaches:

A method for providing fault tolerance for a process within a processing system,
the method comprising:

maintaining a record of a plurality of processes in said processing system,
wherein said plurality of processes are each assigned an identifier; (Li column 3, lines
4-5)

if one of said plurality of processes has a highest priority and no other of said
plurality of processes has a status of primary or has been flagged to become primary,
then assigning a status of primary to said process; (Li column 9, lines 32-34)

if one of said plurality of processes has a highest priority and at least one other of
said plurality of processes has a status of primary or has been flagged to become
primary, then assigning a status of to become primary to said process. (Li column 2,
44-47)

Li fails to explicitly disclose a method for maintaining and analyzing a record of
processes to determine a priority for each process;

In column 7, lines 5-11, Brown clearly teaches a method for maintaining a record
of all the processes and the status of each process. It would have been obvious to a
person of ordinary skill in the art at the time of invention to include the method of
keeping a record of each process as taught by Brown. This would have been obvious
because Brown teaches that the above method is better suited for fault recovery in a
distributed processing system. (Brown column 1, lines 50-53)

As per claim 20, Li teaches:

A method recited in claim 19, wherein said priority is based on a value of said identifier. (Li column 9, lines 39-31)

As per claim 21, Brown teaches:

A method recited in claim 19, wherein assigning of a status is based on a service type of said process. (Brown column 7, lines 5-11)

Allowable Subject Matter

Claims 13, 17, 25, and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Assessor whose telephone number is (571) 272-0825. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571)272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BA



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